

Values	\$2	-1	-2	4	1
Prob.	$\frac{100}{360}$	$\frac{90}{360}$	$\frac{60}{360}$	$\frac{45}{360}$	$\frac{65}{360}$

\$0.56 \$-0.25 \$-0.33 \$0.5 \$0.18

$$\boxed{\$0.66} \times 65 = \$42.90$$

The average win on each spin
(gain) (trial)

- Basically... long run average

- * expected amount/gain
on each one trial
on average.



- Symbol : $E(X) = \$0.66$

↑
variable/
expt.
trial

X	X_1	X_2	X_n
$P(X)$	$P(X_1)$	$P(X_2)$	$P(X_n)$

$$E(X) = X_1 \cdot P(X_1) + X_2 \cdot P(X_2) + \dots + X_n \cdot P(X_n)$$

X	0	1	2	3	4	5
$P(X)$	0.05	0.12			0.4	0.05

$$(0 \cdot 0.05) + (1 \cdot 0.12) + \dots = \boxed{2.93} = E(X)$$

X	1	2	3	4	5	6
P(x)	0.13	0.30	0.12	0.10	0.20	0.15

$$(1 \cdot 0.13) + (2 \cdot 0.30) + (3 \cdot 0.12) + \dots$$

$$E(x) = 3.39$$

$$3.39 \times \overset{58}{\cancel{62}} = 196.62$$

		Live	Die
<u>Gain</u>	X	\$ 1	\$ -99,999
	P(x)		4.5×10^{-6} 0.0000045
		100% 1	○

$$1 \times 0 = 1 = E(x)$$